Appl. No. 09/591,104 Amdt. sent October 19, 2004 Reply to Office Action of July 6, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

| 1 | 1. (Currently amended). An external storage subsystem system comprising. |
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| 2 | a plurality of disk drives for storing data; |
| 3 | a drive interface control unit operatively couple to the disk drives; |
| 4 | a channel interface control unit through which a connection with a supervisory |
| 5 | unit can be established for reading and writing data; |
| 6 | a cache memory connected to the drive interface control unit and to the channel |
| 7 | interface control unit, the cache memory for temporarily storing data between the disk interface |
| 8 | control unit and the channel interface control unit; and |
| 9 | a shared memory connected to the drive interface control unit and to the channel |
| 10 | interface control unit, the shared memory for storing information relating to data that is to be |
| 11 | staged to the cache memory, |
| 12 | the information being used by the channel interface control unit to stage data that |
| 13 | is stored in a plurality of tracks in one or more of the disk drives to the cache memory by way of |
| 14 | the drive interface control unit, |
| 15 | the information further being used by the channel interface control unit to destage |
| 16 | data from the cache memory to be stored to the disk drives by way of the drive interface control |
| 17 | unit, |
| 18 | wherein staging of the data to the cache memory and destaging of the data from |
| 19 | the cache memory are performed according to staging and destaging instructions from the |
| 20 | supervisory unit, the instructions formulated by the supervisory unit according to criteria |
| 21 | provided by a user. |

execution of the host utility program,

| drive and to store data to be written to the disk drive, collectively referred to as user data, wherein the user data on the at least one disk drive is stored to the cache memory in response to a second instruction from the memory and stored to the at least one disk drive in response to a second instruction from | 2. (Currently amended) An external storage subsystem system having at |
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| wherein the user data on the at least one disk drive is stored to the cache memory in responsion first instruction from the host computer, or and wherein the user data is removed from the memory and stored to the at least one disk drive in response to a second instruction from computer based on user defined information and upon operating information provided to | lease least one disk drive and having a cache memory to store data that is read from the disk |
| first instruction from the host computer, or and wherein the user data is removed from the memory and stored to the at least one disk drive in response to a second instruction from computer based on user defined information and upon operating information provided to | drive and to store data to be written to the disk drive, collectively referred to as user data, |
| memory and stored to the at least one disk drive in response to a second instruction from computer based on user defined information and upon operating information provided to | wherein the user data on the at least one disk drive is stored to the cache memory in response to a |
| computer based on user defined information and upon operating information provided to | first instruction from the host computer, or and wherein the user data is removed from the cache |
| | memory and stored to the at least one disk drive in response to a second instruction from the host |
| external storage subsystem. | computer-based on user defined information and upon operating information provided to the |
| | external storage subsystem. |

- 3. (Currently amended): The external storage subsystemsystem as claimed in claim 1, in which the staging in or destaging from the cache memory of the user data is executed in a processing unit of a data-set domain.
- 4. (Currently amended): The external storage subsystem as claimed in claim 2, in which the storage in or removal from the cache memory of the user data is executed in a processing unit of data-set domain.
- 5. (Currently amended): An information processing system having an external storage subsystemsystem and a host unit which is external to the external storage subsystemsystem and connected to the external storage subsystemsystem, in which the external storage subsystemsystem comprises a plurality of disk drives, a drive interface control unit, a channel interface control unit, a shared memory, and a cache memory, in which the host unit executes writing and reading data to the external storage subsystemsystem, and in which the host unit has a host utility program to manage data in the cache memory, and user defined information or operating information of the external storage subsystemsystem for

wherein the host utility program can issue a resident command to instruct the channel interface control unit to set residing data in the cache memory, and can issue a reset

| 12 | command to instruct the channel interface control unit to reset residing data in the cache |
|----|--|
| 13 | memory, |
| 14 | wherein the channel interface unit in the external storage subsystemsystem |
| 15 | receives the resident command and the reset command based on the user defined information or |
| 16 | the operating information, |
| 17 | wherein the drive interface control unit is operable to store data on the disk drives, |
| 18 | wherein the cache memory is in data communication with the drive interface |
| 19 | control unit and the channel interface control unit, |
| 20 | wherein the shared memory is in data communication with the drive interface |
| 21 | control unit and the channel interface control unit, and stores first information relating to data |
| 22 | stored in the cache memory, |
| 23 | wherein the channel interface control unit sets and resets residing data in the |
| 24 | cache based on the first information. |
| 1 | (Original): The information processing system as alaimed in claim 4 in |
| 1 | 6. (Original): The information processing system as claimed in claim 4, in |
| 2 | which the storage of a set of user data in the cache memory or removal of the user data from the |
| 3 | cache memory is executed in a unit of data-set domain. |
| 1 | 7. (Currently amended): The information processing system as claimed in |
| 2 | claim 4, in which the user defined information includes a data-set name which is entered from a |
| 3 | terminal connected to the host unitcomputer. |
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| 1. | 8. (Original): The information processing system as claimed in claim 5, in |
| 2 | which the user defined information includes a data-set name which is entered from a terminal |
| 3 | connected to the host unit. |
| 1 | 9. (Previously presented): A system comprising a host unit and a disk array |
| 2 | system separate from the host unit and in data communication therewith, the disk array system |
| 3 | comprising: |
| 4 | a plurality of disk drives for storing data; |

| 5 | a drive interface control unit operably coupled to the disk drives for transfer of |
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| 6 | data therewith; |
| 7 | a channel interface control unit to receive data transfer commands from a host |
| 8 | unit; |
| 9 | a cache memory in data communication with channel interface control unit and |
| 10 | with the drive interface control unit; and |
| 11 | a shared memory in data communication with channel interface control unit and |
| 12 | with the drive interface control unit, the shared memory having stored therein first information |
| 13 | relating to data staged in the cache, |
| 14 | wherein the host unit can issue a resident command and a reset command; |
| 15 | wherein in response to receiving a resident command from the host unit, the |
| 16 | channel interface control unit accesses the first information to store data received from disk |
| 17 | drives into the cache memory, |
| 18 | wherein in response to receiving a reset command from the host unit, the channel |
| 19 | interface control unit accesses the first information to reset data that is stored in the cache |
| 20 | memory. |